Property Rights and Land Tenure (Indicator 48)[1]

Extent to which legal framework . . . ***Clarifies Property Rights, Provides for Appropriate Land Tenure Arrangements, Recognizes Customary and Traditional Rights of Indigenous People, and Provides Means of Resolving Property Disputes by Due Process***

Rationale and Interpretation

In many regions of the world, lack of clear and appropriate land tenure arrangements are the single greatest causes of unsustainable forestry. Stable property rights and the assurance that these rights will be protected, or disputed through due process, are essential for sustainable forest management. It is suggested that those who depend on forests for daily subsistence and livelihood, or have a connection to forests over long periods of time, will take responsibility for better long-term care of the land if they can own the forest or can be assured access to needed forest resources (Roundtable on Sustainable Forestry 1999).

Useful information for measuring this indicator can result from compilation of relevant laws and customs that address property rights, land tenure arrangements, and the rights of Indian people. Also germane are summaries and assessments of laws and customs that provide access to processes considered necessary for the successful resolution of disputes over property. Carefully prepared, these compilations can allow for subsequent determination of how well various interpretations of property rights are being implemented and the extent to which they are successful in fostering long-term protection of ownership rights in forests and forest land. They can also facilitate the identification of deficiencies, duplications and overlapping responsibilities, an exercise which will enable the making of recommendations for subsequent corrective action.

Indicator 48 suggests a number of concepts and principles that are to be identified and assessed. To guide this review, brief definitions of these concepts are: *property rights* — claims, titles or interests in property that are enforceable by law, custom or tradition (bundle of characteristics [exclusive, enforceable] that convey certain powers to the owner of a right in property); *land tenure arrangements* –- instruments or relationships used by people, governments or corporate bodies to establish control over, occupy or use property; *customary and traditional rights* — claims, titles or interests in property that is enforceable by custom, legend, inheritance, tradition, or folklore; and *due process means of resolving property dispute* — means of guaranteeing procedural fairness where actions of a party would deprive one of liberty or property (Gifis 1984).

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Conceptual Background

Property is a social notion that expresses the political and economic order of society wherein governance systems legitimize, protect and challenge the interests of one party over another (Hanna and others 1996). Property is generally viewed as a bundle of rights, rules, and responsibilities that expresses the relationships between right holders, right regarders, and right protectors (Warren 1998). Rights consist of power, privilege or demand inherent in one person and expressed over another. Any change in the structure of rights usually involves an increase in the rights of some and decreases in the rights of others. Current theories suggest that rights are exercised under at least three different property regimes: private property, public-State property and common property (Warren 1997) (Table 1). Over time, notions of property may move from one category to another, often as a reflection of society's changing values and the scarcity of certain types of property. They change in response to many different conditions, including market behavior, social and political sentiments, scientific knowledge, and new technologies. Property rights are most accurately defined as a social construct which survives only as long as society maintains the will and desire to enforce their nature (Marchak 1998).

Characteristics (or components) that are used to define and evaluate property rights include the concepts of completeness and exclusivity, transferability, and enforceability (Rideout and Hessein 1997, Field 2001). Completeness refers to the degree to which ownership rights may be attenuated, such as through mineral rights, water rights and utility easements. Exclusivity compliments the concept of completeness and refers to the degree to which all benefits and costs accrue to the owner. Exclusivity and completeness have little meaning if the resource is migratory, enforcement of property rights is too expensive, or the property is located in a jurisdiction without a fully developed legal system (Rideout and Hessein 1997). As stated, enforceability at a reasonable cost is necessary in order to maintain property rights. Property rights and property should be transferable so as to create incentives to maintain a maximum market value.

An efficient and well-established property rights system provides security that rights will be recognized in the future by potential competitors for these rights and that the rules are well understood. In the United States, the concept of property rights is a storied and continually evolving set of ideas and constructs. Much of the present comprehension of property rights has its origin in English Common Law, emanating from the Magna Carta. Little of what is considered property rights are codified into law in the United States, in deference to many countries which are more closely based on a Napoleonic code-type system. Property rights in the United States are restricted by the police powers of the

State and each level of government's power of taxation, eminent domain, and escheat (Warren 1997). Property rights are constitutionally addressed under the Fifth Amendment of the Bill of Rights, which states "No person shall…be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation." It is important to note that property rights are not given direct protection under this clause, but are only afforded due process when they are addressed.

Table 1. Rights, Responsibilities and Rules in Three Example Property Regimes

Characteristic	Property Regime		
	Private Property	Common Property	Public-State Property
Resource Rights	Exclusion, disposal, use, enjoyment	Exclusion, disposal, use, enjoyment	Exclusion, disposal, use, enjoyment
Right Holder(s)	Individual or corporation	Identifiable, interdependent group or community	State (government on behalf of citizens)
Responsibilities (liabilities) of Right Holder(s)	Refrain from socially unacceptable uses	*Group*: Refrain from socially unacceptable uses *Member*: Respect intra-group rules	Maintain social objectives; determine rules
Expectation of Right Regarder	Expect socially acceptable uses	Expect socially acceptable uses	Expect socially acceptable uses
Responsibilities (liabilities) of Right Regarder	Observe right holders rules; refrain from preventing use	Observe right holders rules; refrain from preventing use	Observe rules; refrain from preventing use
Rules and Regulations	Determined by individual or corporation	Determined by identifiable interdependent groups or community	Determined by statutes, rules, common law
Enforcement and Protection	State	*Intra-group*: group and State *External*: State	State

Note: Additional property regimes are "common pool resources" and "open access resources."
Source: Bromley 1991 and Warren 1997.

Property rights in the context of forests are expressed as relationships between individuals and groups with respect to forest land. In considering the sustainability of forests, property rights include the ability to exclude or control access; enjoy or treasure; dispose, alienate or transfer; manage or manipulate; and use, withdraw, consume or transform (Warren 1997). Characteristics assigned notions of property rights can provide for or detract from socially efficient resource use, specifically sustainable forest resource use and management. Without some set of agreed to and enforceable characteristics,

such as described above, forest owners may fail to invest in productive activities involving their forests. This lack of private investment may have deleterious effects on economic efficiency and sustainability (Zhang 1999). On the other hand, the State may wish to weaken the property rights of some in order to enhance benefits which it views as important to (conferred upon) many or all citizens. This problem of proper benefit allocation is a social construct that inevitably leads to a paradox of compensation, suggesting that either the property owner or the government will behave inefficiently (Zhang 1999). In reality, the likelihood is that both will behave somewhat inefficiently.

Property right notions are a construct of western civilizations. In some cases, traditional and customary rights involving property are not necessarily codified in a western sense but are respected and observed by the cultural group creating those rights. An example is Indian people in the United States. In such cultures, rights to resources are intricately tied to historic perspectives on resource use and to social mechanisms for dealing with competition for resources. Diversity of resource control systems is high and often correlated to a particular environmental setting and time (Frykenberg 1977, Vecsey and Venables 1980, Warren 1997). Compounding these perspectives on property rights and land tenure concepts is the reality that government can hold property in trust for certain people, including American Indians. In 1990, nearly 16 million acres of forest land were held in trust for the latter by the United States government. The latter has a “trust responsibility to protect, conserve, utilize, manage, and enhance Indian forest land and the economic and other benefits from Indian forest land, in perpetuity, including the provision of essential primary and secondary roads (U.S. Congress 1990).

Current Legal Capacity

Information clarifying property rights, land tenure arrangements, the rights of Indian people and means of resolving property disputes is wide ranging and very rich. Unfortunately from a sustainable forestry perspective, such information has not been systematically and comprehensively assessed and analyzed. As for specific information sources, the most important are found in judicial case law and its interpretation. Other sources include academic and popular presses (especially during periods of uncertainty regarding property rights), periodic surveys of forest land ownership (for example, Birch 1996), and legal case books and databases available from private sources. As interest in accessing new approaches to resolving conflicts over property and property rights has increased, reports describing these approaches have become more common (for example, land trusts, conservation easements) (Morrisette 2001).

Property Rights and Land Tenure

Federal Legal Clarifications

Property rights and land tenure arrangements have been dealt with and meaningfully clarified (and shaped) by Federal courts. Not only have the courts dealt with disputes between private parties, but also between private and public entities. For example, the ability of states and local governments to zone land as an established aspect of police power has been upheld by the U.S. Supreme Court in *Reinman v. City of Little Rock 237 U.S. 177 (1915), Fischer v. St. Louis 194 U.S. 223 (1904),* and *Bacon v. Walker 204 U.S. 394 (1907).* These rulings were supported by and drawn from public nuisance law. In the last hundred years, the Supreme Court has addressed the Fifth Amendment and what constitutes a taking in terms of a governmental regulatory context. This is first directly addressed in *Pennsylvania Coal v. Mahon 260 U.S. 393 (1922),* "while property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking." Since this ruling, Federal courts have considered the effects of a regulation on a property's value, usually requiring a complete loss of private value before the action in question is considered a taking (Wiebe and others 1996, 1998). These clarifications are ongoing and evolutionary, with the most recent refinement of partial regulatory takings in *Palazolo v. Rhode Island* set forth by the Supreme Court in June 2001. The court ruled that the acquisition of land with notice of a prior regulation does not, in itself, bar the buyer from claiming that the regulation constitutes a taking. A study by the Congressional Research Service found that of 135 Federal takings cases tried between 1990 and 1994, only 21 were found to be takings (Meltz 1995).

Much of recent efforts to clarify property rights and land tenure arrangements have been in response to Federal environmental legislation. In the last 20 years a number of Federal laws have been enacted that have brought land tenure and property rights issues to the forefront both in terms of usufructory rights and restrictions on Federal lands (Table 2). Especially significant examples from a property rights perspective are the Federal Water Pollution Control Act of 1972 (as amended) (especially section 404), Clean Air Act of 1955 as amended), the Resource Conservation and Recovery Act of 1976 (as amended), the Comprehensive Environmental Response, Compensation, and Liability Act ("Superfund") of 1980 (as amended), the National Environmental Policy Act of 1969, and the often cited Endangered Species Act of 1973. Although the last 10 years have seen a number of Congressional proposals to protect private property rights and to clarify land tenure arrangements, none have been successfully enacted into law.

Table 2. Selected Statutes Pertaining to Usufructory Rights and Restrictions on Federal Land

Federal Statute
Administrative Procedure Act of 1948
Alaska National Interest Lands Conservation Act of 1980
Alaska Native Claims Settlement Act of 1971
Antiquities Act of 1906
Bald Eagle Act of 1940 (as amended)
Clean Air Act of 1955 (as amended)
Coastal Zone Management Act of 1972 (as amended)
Comprehensive Environmental Response, Compensation, & Liability Act of 1980 (as amended)
Eastern Wilderness Act of 1975
Endangered Species Act of 1973 (as amended)
Federal Coal Leasing Amendments Act of 1976
Federal Land Policy and Management Act of 1976
Federal Onshore Oil and Gas Leasing Reform Act of 1987
Federal Water Pollution Control Act of 1972 (as amended)
Forest and Rangeland Renewable Resource Planning Act of 1974
General Mining Law of 1872
Knutson-Vandenberg Act of 1930
Lacey Act of 1900
Migratory Bird Treaty Act of 1918
Mineral Leasing Act, Potassium Leasing Law, Sulfur Act of 1920
Mineral Leasing Act for Acquired Lands of 1947
Mineral Resources on Weeks Law Lands of 1947
Mining in the Parks Act of 1976
Multiple-Use Sustained-Yield Act of 1960
National Environmental Policy Act of 1969
National Forest Management Act of 1976
National Historic Preservation Act of 1976
National Park Service Organic Act of 1916
National Trails System Act of 1968
National Wildlife Refuge System Administration Act of 1966
North American Wetlands Conservation Act of 1968
Organic Administration Act of 1897
Refuge Recreation Act of 1962
Resource Conservation and Recovery Act of 1976 (as amended)
Surface Mining Control and Reclamation Act of 1977
Surface Resources Act of 1955
Water Resources Planning Act of 1965
Weeks Act of 1911
Wild and Scenic Rivers Act of 1968
Wilderness Act of 1964

Source: USDA Forest Service 1993 and Coggins and others 1993.

State Legal Clarifications

Although the Federal Government has engaged importantly in clarifying matters of property rights, property law and its interpretation has been primarily a State responsibility. State governments have proceeded to establish various laws, rules and administrative procedures that clarify property rights and land tenure arrangements involving forests, most of which have been in response to perceptions of local infringement on the rights of private property owners (Cheng and Ellefson 1993, Malmsheimer and Floyd 1998). One of the earliest judicial rulings on the matter (1947) involved Washington's forest practice regulatory law in which the State's right to regulate privately prescribed practices was affirmed by the U.S. Supreme Court (32 Wash. 2d 551, 202 P.2d 906, 70 S. Cr. 147 [1947]) (Ellefson 2000). Property-right protecting Initiatives important to sustainable forestry take many forms, including nuisance classification laws, right to practice forestry laws, and laws restricting ordinances. In 1996, 31 States had statutory provisions that provided some sort of defense for landowners from courts finding that forestry activities are considered a nuisance under State law (Table 3) (Malmsheimer and Floyd 1998). Ten States had potential statutory provisions to do so (right-to-farm laws that do not specify the inclusion of forestry, but forestry is included in agricultural activities in other statutes), and eight States did not have statutory provision against forestry activities being considered a nuisance (have right-to-farm laws, but do not include forestry activities as agricultural activities in other statutes).

States have also addressed concerns over local governments establishing ordinances that may classify forestry activities as a nuisance (Table 3). Ten States have State laws (for example, forest practice laws) that prohibit such ordinances; five have laws that prohibit local zoning ordinances that limit forestry activities; and four States have statutory provisions to link local ordinances with broader State forest practice regulatory laws. These laws generally provide a defense of forestry activities, often by banning or partially banning local ordinances which limit forestry practices on private land (Ellefson and others 1995). The laws also set boundaries limiting the classification of a nuisance to such things as conducting forestry activities in a negligent manner or causing flooding or pollution. Most State laws restricting local ordinances focused on forestry activities have been enacted since 1989. Three were enacted in the 1970s, 18 in the 1980s, and 10 in the 1990s through 1996 (Malmsheimer and Floyd 1998).

Protecting private property from takings has also been a focus of State laws. In 1996, 18 States had passed such laws (Table 4) (Zhang 1996). They were of two major types, namely: assessment laws, which are procedural, requiring that agencies follow certain review processes and guidelines, avoiding unnecessary takings; and compensation laws, which are more substantive, providing remedies to recover financial losses ("inordinate burdens" by State and local regulations)

from partial takings of private property. In Mississippi, for example, compensation of private forestland owners is required if State regulations reduce the value of the landowner's property by 40 percent or more. All of these State laws have been enacted in the 1990s and generally mimic laws that have been proposed to the U.S. Congress.

Table 3. State Statutory Provisions Denying Forest Practices and Nuisances and Restricting Local Government Regulation of Forest Practices, by State. 1996.

Region and State	Statutory Provisions Protecting Forest Practices from being Considered Nuisances			Statutory Provisions Restricting Local Government Ordinances Regulating Forest Practices		
	Statutory Provision Exists	Potential Statutory Provision	Statutory Provision Does Not Exist	Statutory Provision Exists: No Ordinances	Statutory Provision Exists: No Zoning Ordinances	Statutory Provision Exists: Ordinances Linked to Forest Practice Law
North						
Connecticut	X					X
Delaware	X					
Illinois		X				
Indiana	X			X		
Iowa	X					
Maine			X			X
Maryland			X		X	
Massachusetts	X					
Michigan	X					
Minnesota		X		X		
Missouri			X		X	
New Hampshire	X				X	
New Jersey	X					
New York			X			
Ohio	X				X	
Pennsylvania	X				X	
Rhode Island	X					
Vermont		X				
West Virginia	X					
Wisconsin	X					
South						
Alabama		X				
Arkansas		X				
Florida			X			
Georgia	X					
Kentucky	X			X		
Louisiana	X			X		
Mississippi	X			X		
North Carolina	X					
Oklahoma			X			
South Carolina	X					
Tennessee	X			X		
Texas		X				
Virginia	X					
West						
Alaska	X					
Arizona	X					
California	X					X
Colorado	X					
Hawaii		X		X		
Idaho	X					X
Kansas			X			
Montana		X		X		
Nebraska			X			
Nevada						
New Mexico		X				
North Dakota	X					
Oregon	X			X		
South Dakota	X					
Utah	X					
Washington	X			X		
Wyoming		X				

Note: Nevada has not enacted a right-to-practice forestry law that provides protection against nuisance lawsuits. Source: Malmsheimer and Floyd 1998.

Table 4. State Statutory Provisions Addressing the Taking of Private Property, by State. 1996.

Region and State	Statute Requiring Assessment Prior to Regulatory Implementation	Statute Requiring Compensation of Landowner for Regulatory Taking	Statute Requiring Combination of Assessment and Compensation
Arizona	X		
Delaware	X		
Florida		X	
Idaho	X		
Indiana	X		
Kansas	X		
Louisiana			X
Mississippi		X	
Missouri	X		
Montana	X		
North Dakota			X
Tennessee	X		
Texas			X
Utah	X		
Virginia	X		
Washington	X		
West Virginia	X		
Wyoming	X		

Source: Zhang 1996.

Due Process and Dispute Resolution

The concept of due process, like property rights, has also evolved over years, changing mostly through interpretation by Federal courts. Due process is a historical product tracing back to Britain. The first mention of it was in a statutory rendition of one of the chapters of the Magna Carta in 1354. Federal courts have seen fit to clarify due process as relates to property and land tenure arrangements. The focus has been on interpretation of the Fifth amendment (previously quoted) and again in the Fourteenth amendment "…nor shall any State deprive any person of life, liberty, or property, without due process of law" (Fifth Amendment applied to the Federal Government until Fourteenth Amendment was ratified). Importantly, the fact that property rights are protected by due process is of little value unless there is knowledge of what due process entails.

Federal courts have clarified that due process is more than a mandated procedure determined by the legislative branch. Due process " . . . is a restraint on the legislative as well as on the executive and judicial powers of the government, and cannot be construed as to leave congress free to make any process 'due process of law' by its' mere will," *Murray's Lessee v. Hoboken Land*

and Improvement Co. 59 U.S. 272 (1856). This sentiment is backed up in other cases including *Trustees of Dartmouth College v. Woodward 17 U.S. 518-82 (1819)* and *Jones v. Robbins 74 Mass (8 Gray) 329 (1857)*. In working with administrative agencies, the court has ruled that the demands of due process do not require a hearing at any particular point in the proceeding, so long as a hearing is held prior to an order becoming effective, *Opp Cotton Mills v. Administrator 312 U.S. 126. 152. 153 (1941).* The court has held that when the constitution does require a hearing, it must be a fair hearing, held before a tribunal which meets currently prevailing standards of impartiality, *Wong Yang Sung v. McGrath 339 U.S. 33,50 (1950)* and *Arnett v. Kennedy 416 U.S. 134, 170 (1974).* The court has also held that a party must be given an opportunity to present evidence and to know the claims of the opposing party and to meet them: *Margan v. United States 304 U.S. 1, 18-19 (1938), Gonzales v. United States 348 U.S. 407 (1955), United States v. Nugent 346 U.S. 1 (1956),* and *Gonzales v. United States 364 U.S. 59 (1960*).

Federal courts have spoken frequently on how the Fifth and Fourteenth Amendments to the U.S. Constitution are to be implemented. Their rulings set forth certain fundamental principals such as advance notice of alleged claims, hearings prior to decisions, hearing procedures, adequate representation, and the nature of evidence submitted at hearings. These prescriptions, and many more, are the foundations that enable society to meet the intent and spirit of Constitutional provisions involving due process. In recent years, however, a number of additional approaches involving conflict management have evolved and have been suggested to be of value for addressing conflict over property. They include various forms of consensus-driven processes (negotiation, facilitation, mediation) as well as many varieties of adversarial-drive processes (arbitration, administrative hearings, judicial proceedings). Although judicial proceedings involving formal procedures of due process have been given considerable notoriety in recent years, other less formal and more collaborative approaches to conflict over property rights have also become available. Unfortunately, a comprehensive review of their application to property rights issues has not be carried out (Moulton 1995).

Indian Peoples Rights

Indian peoples in the United States have experienced a much different evolution of property rights and land tenure arrangements. Very few Indian tribes ever conceived of the idea of land ownership, and even those few who did, thought of it in a much different way then the first arriving Europeans. In 1790, congress adopted one of the first laws affecting Indian people's property rights, the first Non-Intercourse Act, which reserved the right to acquire Indian lands to the United States to the exclusion of individuals and States. Some tribes have brought suit for recovery of lands in violation of the 1790 statute, such as *South Carolina v. Catawba Indian Tribe Inc. 476 U.S. 498 (1986).*

The United States courts first examined the issue of Indians and the nature of ownership and title to lands in *Johnson v. M'Intosh 21 U.S. 543 (1823)*, stating that tribes held their lands by "Indian title" and that tribes had the right to occupy the land and retain possession of it (Nash 1999). Also a significant statute in the evolution of Indian property rights is the General Allotment Act of 1887. The latter legitimized the notion that Indians would become more quickly assimilated to European cultural attitudes if they were owners of a parcel of land and encouraged to engage in agricultural activities. Each individual was to be given 80 acres of agricultural land or 160 acres of grazing land. The law had limited success (resulting in a large loss of tribal lands) and was subsequently addressed by the Indian Reorganization Act of 1934 which prohibited any further appropriation of land and restored any surplus lands to tribal ownership.

In 1946, the Indian Claims Commission was established to hear claims that had been barred by an 1863 statute that prohibited Indian tribes from making claims against the United States. The Commission was allowed to hear five types of claims including "claims arising from the taking by the United States, whether as a result of a treaty of cession or otherwise, of lands owned or occupied by the claimant without payment for such lands or compensation agreed to by the claimant" 60 Stat. 1049, 25 U.S.C. 70a (Nash, 1999). Recently, there has been an increasing level of autonomy in decisionmaking on tribal lands regarding forest land, beginning in earnest with the Alaska Native Claims Settlement Act in 1971. The latter was followed by the Indian Self-Determination and Educational Assistance Act of 1975, which decreased the role of the Division of Forestry within the Bureau of Indian Affairs in forest related decisionmaking on tribal lands. The 1983 Indian Land Consolidation Act attempted to reduce fractionalization of Indian lands. Finally, the National Indian Forest Resources Management Act of 1990 strengthened the position that Indian forest lands are to be treated as private lands not as lands in the public domain (Warren 1998) (Table 5).

Table 5. Selected Case Law and Statutes Affecting Land Tenure and Forest Resources on Indian Lands.

Year	Case or Statute
1874	United States v. Cook, 19. S. (Wall) 591 (Indians possess right to occupy land, but not have title; timber cut for land clearance only)
1877	Indian General Allotments Act 25 U.S.C. 331 (Authorizes allotment of reserved lands to individual Indians in tracts of 40, 80 or 160 acres)
1889	Dead and Down Timber Act of Feb. 16, 1889, 25 Stat. 673, 25 U.S.C. 196 (Authorizes sale of dead timber on Indian allotments and reservations for the benefit of Indians residing on reservations)
1910	Indian Allotments Act of June 26, 1910, Stat. 857, 25 U.S.C. 406, 407 (Authorizes Bureau of Indian Affairs to sell timber on allotted and unallotted lands)
1934	Indian Reorganization Act, Act of June 18, 1934, ch 576, 48 Stat. 984, 25 U.S.C. 466 (Authorizes Bureau of Indian Affairs to establish rules and regulations to accomplish sustained yield management of Indian forests)
1971	Alaska Native Claims Settlement Act, 85 Stat. 688 (Revokes reservations and Indian allotment authority in Alaska)
1975	Indian Self-Determination and Education Assistance Act 88 Stat. 2203-2217 (Authorizes Indian citizens' rights to control their direction and measures)
1980	United States v. Mitchell, 445 U.S. 535 (1887 Act did not establish Federal fiduciary responsibility for management of Indian allotted forest lands, but 1910 Act had recognized a Federal trust responsibility for the management of Indian forest resources)
1983	Indian Land Consolidation Act, 25 U.S.C.> 2201 et seq. (Authorizes reduction in extensive fractionation of individual Indian ownerships)
1990	National Indian Forest Resources Management Act, 104 Stat. 4532 (Authorizes promotion of cooperative Federal and tribal management and protection of Indian forest resources)

Source: Warren 1997.

Summary of Conditions

Property rights, land tenure arrangements and the rights of Indian people are storied institutions that have evolved from evolutionary processes involving law making, traditions and the operation of private markets. These institutions, and the concepts and principles on which they are based, often date back to long before the United States was established. Over this period of time, property rights and tenure arrangements appear as a reflection of a society's particular set of fundamental values and beliefs; evolutionary in the sense that they change as society's values change; determined by due process of law; essential to, and must be stable for, sustainable forest management; and are important to Indian people that often have significant links with forests.

In light of the background and current conditions presented above, the following observations would seem relevant to the capacity to identify and measure activities involving property rights and associated subjects:

• Property rights and land tenure arrangements are extremely diverse, have evolved through time, and are continuously being defined, interpreted and revised by all levels of government. Responsibility for private actions involving property is increasingly being associated with issues involving claims of rights to property.

• Property rights and land tenure arrangements have mostly been defined and interpreted in State and Federal case law. In the last decade, especially important case law regarding property rights and compensation has been established by Federal courts.

• Property rights and land tenure arrangements of Indian people have largely been the responsibility of the Federal Government. In recent years, Federal attention has focused on the forest resources associated with Indian people and the often unique and special importance of forests to Indian culture and way of life.

• Processes for resolving disputes over property rights and land tenure are evolving, although the Constitution (Fourteenth Amendment) provides the foundation for citizen protection against State deprivation of life, liberty and property. Institutional structures for addressing disputes are many (legislatures, courts, executive agencies) as are approaches for settling disputes (negotiation, arbitration, collaboration, citizen initiative).

Issues and Trends

The literature identifies a number of major issues and trends involving property rights and land tenure arrangements that are worth noting. Consider the following (Binkley and others 1996, Bromley 1991, Ellefson and others 1995, Flick 1994, Goldstein and Watson 1997, Lund 1995, Morales 1991, Moulton 1995, U.S. Congress 1990, Warren 1997 and 1998, Zhang 1996):

• Property rights and land tenure arrangements are growing as popular yet often contentious political topics (more than 100 bills addressing property rights introduced during 104th Congress) (Goldstein and Watson, 1997). The increasingly finite space available to citizenry has fostered interest in protecting rights thought to accompany ownership of property. Also, increases in Federal environmental law since the late 1960s has given special incentive for clarification of activities involving property rights and land tenure.

• Property-related advocacy groups are increasing across the entire spectrum of property beliefs, currently numbering more than 500 with membership in the millions (Lund 1995). Although debates between these differing groups are often acrimonious and sometimes violent, the discussions that do occur are likely to result in better understanding and tolerance for a wider variety of property regimes.

• Property rights concepts important to sustainable forestry are often unclear. In the future, however, they may become more stable and consistent as a result of the increased attention devoted to them (statutes, case law, public discussion). Conversely, continuing controversy may foster a climate in which there is growing uncertainty over restrictions on certain forestry activities, increased transaction costs, greater risk of civil and criminal penalties, and confusion resulting from overlapping government jurisdictions.

• State governments are likely to give increasing attention to property rights and land tenure conditions considered important to sustainable forestry. Increasingly common initiatives are likely to include additional State laws specifying the right to practice forestry, prohibition of local ordinances limiting the practice of forestry, and absolving forestry practices from being considered a nuisance.

• Special property arrangements that support the long-term sustainability of natural resources are increasing in number and acceptability. These arrangements include conservation easements, private and public land trusts, co-management of private lands, marketing of rights associated with property (development rights) and debt-for-nature swaps.

• Voluntary actions by landowners and incentives provided by government and certain private interests are likely to increase and have further impact on land tenure and on perceptions of rights in forest property. Fiscal and tax incentives to deter ownership fragmentation and voluntary adoption of forestry best management practices are examples.

• Laws and regulations to address forestry practices on private lands are more often being designed to be more sensitive to private interests in private property. Increasingly suggested is that regulations be consistent with strong history of public policy in favor of environmental protection or land use control; be rationally based, reasonably constructed and developed through due process; be convincingly determined to be directly beneficial to public health and general welfare; and result in benefits that are widely distributed throughout various segments of the public.

• Indian people are increasingly seeking and being granted autonomy of decisionmaking on Indian lands. Such is occurring in a general sense (legal authority to determine destiny generally) and in terms of how Indian organizations address issues involving forest resources under their control.

Information Adequacy

Specification

The variables or combinations of variables that can be used to describe property rights, land tenure arrangements, and ways of resolving disputes over such arrangements are many. Definition and scope issues abound. For example, should public lands be part of land tenure discussions? Is the legal framework of concern more than just formal laws, regulations, and guidelines? Should property rights assessments include case law, administrative law, and formal agreements involving property? And how are noncodified customs and traditions to be addressed in reviews of land tenure and property rights?

State forestry agency activities involving gathering and analysis of information regarding property rights, land tenure and rights of Indian people is very limited. In 1999, lead forestry agencies in only seven States (Delaware, Georgia, Hawaii, Louisiana, New Jersey, New York, Texas) specifically stated they gather and analyze information about these conditions. Of those States, two indicated the information was abundant; three sufficient; and two indicated they had access to some, but very little, information of this sort. Four States indicated the quality of information was adequate; only one stated it was excellent (Louisiana) (National Association of State Foresters in 1999).

Information regarding property rights and land tenure arrangements as they relate to sustainable forestry in the United States is critical to building better understanding of how property ownership influences forest sustainability. Unfortunately, a true understanding of these rights and arrangements in the context of forests and forestry is often unclear, primarily because information about them has not been gathered in a comprehensive sense nor subject to any methodical analysis. Consider the following concerns over information adequacy:

• *Measures of Rights and Tenure* – Comprehensively identifying current and potential variables that can be used to measure property rights and land tenure arrangements have not occurred (Are current measures of property rights and land tenure appropriate? What is their origin and how have they changed over the years? What alternatives might provide a more effective representation of property rights and tenure conditions?)

• *Documentation of Types of Property Rights and Tenure Arrangements* — Except in isolated circumstances, information about the types, frequency, and trends in land tenure arrangements has not been assembled in any systematic fashion (What are the specific statutory expressions of property rights within all property regimes [Federal, State, local, treaties, land grants]? How consistent are these laws and regulations in their treatment of property rights as relates to sustainable forestry? What major trends are occurring in formal expressions [statutes, rules, treaties, administrative agreements] of concepts of property and land tenure? What is the nature of nonstatutory and nonjudicial expressions of property rights and land tenure [customs and traditions]? How common and how effective are institutions that provide for partial claims to property [easements, trusts])?

• *Societal Dispute of Claims* — Information about the number and types of claims on property rights involving forests has not been gathered nor systematically reviewed for patterns of importance (How many and how intense are the disputes? What is the rationale for the disputes? Is there evidence of stability in certain property rights claims? What disputes require attention of current legal systems and which exits but cannot be resolved by current systems? How great is the tension between the public good and private claims to property? What is the appropriate balance between the sovereign state and private individuals on mater involving land tenure?).

• *Security of Rights and Tenure Conditions* — Information about the extent to which current legal and institutional frameworks provide stability and guarantees of property right claims has not been gathered and analyzed for forest conditions (What is the extent of conflicting or overlapping claims on land and resources? How are rights to surface and subsurface resources in forest settings being addressed? To what extent do Indian people claims on forests cloud private property rights? Are private inholdings within public lands to be considered secure? Do laws providing rights to practice forestry also extend long-term security to forestry investments?)

• *Recognition of Indian People Rights* – Except in isolated individual cases, information about the type, extent, and status of Indian people's claims to forest resources have not been adequately documented and analyzed (What extent does the legal framework acknowledge and protect property rights claims of Indian people and historic land and resource claims? Are the customary and traditional claims of Indian people capable of being codified so that they can be recognized and protected within existing legal processes? Is there sufficient flexibility within existing legal systems to allow for rights claims based on nontraditional evidence to be recognized and protected [for example, religious

need to not leaving any trace of property use]? How are subsistence claims based upon historic use to be documented [community knowledge] and are they capable of being processed by existing legal processes?).

• *Resolving Disputes by Due Process* — Information about processes for resolving disputes is extensive, but has not been comprehensively gathered with a focus on property rights and land tenure arrangements (What type of processes are being used and how effective are they in addressing property rights concerns? Do all current legal frameworks include the elements of due process [notice, opportunity for comment, appeal]? Are processes [for example, giving notice] involving those who are indirectly as well as directly affected by a claimant's dispute? Are there adequate legal mechanisms for resolving conflicts between property rights claims between Indian people, historic land claims, and other claims to the use and ownership of lands and resources?)

• *Stabilizing Influence over Rights and Tenure* — Information about conditions that foster stability and certainty in property right and land tenure conditions has not been gathered and assessed in any meaningful way (What broad social, political, and economic conditions [interest rates, taxation, technology] favor or detract from certainty over property rights and tenure arrangements? What government approaches are most appropriate for securing stability in conditions of property rights [fiscal and tax incentives, well-designed regulatory initiatives, right to practice forestry statutes]? Can those claiming private property rights in forests actually facilitate stability in rights to claimed property [voluntary acceptance of best forest management practices]? How are tenure arrangements to be established so as to secure some semblance of certainty required for long-term investment in forests?).

• *Land Ownership Stability* — Except in a limited number of cases, changes in land ownership patterns, as influenced by property rights and land tenure conditions, has not been systematically assessed (What are current and prospective rates of change in forest land ownership? To what extend is fragmentation or consolidation of ownership affected by property right and land tenure considerations?)

Recommendations

The ability to understand current capacity to influence forest sustainability will depend a great deal on the processes and institutions that available to protect and ensure stability in property rights. Where the latter are in dispute, there must be effective and easily accessible due process that guides disputing parties toward a solution to the events that are in contention. In the context of Indicator Number 48, there are a number of information voids that need to be addressed in order to gain such an understanding. The following actions seem appropriate:

• *Comprehensive review of ability to clarify*. Conduct a comprehensive review of current property rights and land tenure arrangements with a focus on determining whether existing authorities, directions and policies actually clarify property rights and provide for appropriate land tenure arrangements on matters involving forest resources (example information sources are Westlaw and Lexis-Nexis databases, Federal and State appellate court opinions, statutes of Federal, State and local governments). The review should also assess the effectiveness of current mechanisms and procedures that are used to resolve property disputes. Special treatment in the review should be given to the customary and traditional rights to forest properties as sought by Indian people.

• *Responsibility for conducting review*. Assign responsibility for conducting the review of property rights and land tenure arrangements to a specific (current or new) research or administrative unit located within a Federal agency, a college or university, or a nonprofit organization actively engaged in such subjects. This responsibility should be assigned to an organization that has a proven track record of understanding property rights issues and a history of offering positive land tenure arrangements as to solutions to disputes over property.

• *Devote resources to review*. Invest in the review sufficient resources as are necessary to provide the type and quantity of information necessary to dramatically improve understanding of current customs, authorities, and procedures to clarify property rights and land tenure arrangements.

Indicator Appropriateness

Indicator Definition

Indicator 48 suffers from the inclusion of many words and phrases that are unclear in definition and intent, for example “clarifies,” “property rights,” “land tenure arrangements,” “customary and traditional rights,” and “means of resolving disputes.” Each of these words or phrases supposedly embodies an agreed to set of fundamental concepts and principles. Such is not always the case as is highlighted by the need to set forth definitions earlier in the information review for this indicator. Further compounding the specification problem is that new words or phrases are continually being suggested, often without reference to well established or newly developed principles or concepts. The indicator also suffers in specification of what is meant by “indigenous people.” The indicator would benefit from rewording such as “. . . *provides for appropriate land tenure arrangements, and provides means of resolving property disputes by due process.*”

Cross-Cutting Conditions

Crosscutting indicator issues involving Indicator 48 are frequent, particularly as they relate to concepts involving laws and values, public participation, funding and planning. Among the potentials for difficulty in this respect is Indicator 48's relationship to Indicators 38 (investment in forests), 39 (investment in research), 49 (planning and assessment), 50 (public participation), 52 (special values), 53 (public involvement and education), 54 (planning and coordination), 57 (enforce laws and codes), 61 (forest inventories), 64 (value integrative methods), and 66 (human intervention impacts). Such are obvious sources of crosscutting implications for Indicator 48. There may be other indicators that are also relevant in this respect.

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